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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/005,438

DATE: 09/16/2002

TIME: 15:21:40

Input Set : N:\Crf3\RULE60\10005438.raw
Output Set: N:\CRF4\09162002\J005438.raw

1 <110> APPLICANT: Tse Wen Chang
2 Liming Yu
3 <120> TITLE OF INVENTION: Hybrid with Interferon-alpha and an
4 Immunoglobulin Fc for Treatment of Tumors
5 <130> FILE REFERENCE: 95-2AAA
7 <140> CURRENT APPLICATION NUMBER: 10/005,438
8 <141> CURRENT FILING DATE: 2001-12-03
10 <150> PRIOR APPLICATION NUMBER: US/09/268,787
11 <151> PRIOR FILING DATE: 1999-03-16
14 <150> PRIOR APPLICATION NUMBER: 08/994,719
15 <151> PRIOR FILING DATE: 1997-12-19
16 <150> PRIOR APPLICATION NUMBER: 08/719,331
17 <151> PRIOR FILING DATE: 1996-09-25
18 <150> PRIOR APPLICATION NUMBER: 08/579,211
19 <151> PRIOR FILING DATE: 1995-12-28
20 <160> NUMBER OF SEQ ID NOS: 11
21 <170> SOFTWARE: FastSEQ for Windows Version 4.0
23 <210> SEQ ID NO: 1
24 <211> LENGTH: 1254
25 <212> TYPE: DNA
26 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <221> NAME/KEY: CDS
29 <222> LOCATION: (1)...(1251)
30 <223> OTHER INFORMATION: recombinant sequence based on human sequences
31 <400> SEQUENCE: 1
32 atg gcc ttg acc ttt gct tta ctg gtg gcc ctc ctg gtg ctc agc tgc 48
33 Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys
34 1 5 10 15
35 aag tca agc tgc tct ctg ggc tgt gat ctg cct caa acc cac agc ctg 96
36 Lys Ser Ser Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu
37 20 25 30
38 ggt agc agg agg acc ttg atg ctc ctg gca cag atg agg aaa atc tct 144
39 Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Lys Ile Ser
40 35 40 45
41 ctt ttc tcc tgc ttg aag gac aga cat gac ttt gga ttt ccc cag gag 192
42 Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu
43 50 55 60
44 gag ttt ggc aac cag ttc caa aag gct gaa acc atc cct gtc ctc cat 240
45 Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His
46 65 70 75 80
47 gag atg atc cag cag atc ttc aat ctc ttc agc aca aag gac tca tct 288
48 Glu Met Ile Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser

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49	85	90	95	
50	gct gct tgg gat gag acc ctc cta gac aaa ttc tac act gaa ctc tac			336
51	Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr			
52	100 105 110			
53	cag cag ctg aat gac ctg gaa gcc tgt gtg ata cag ggg gtg ggg gtg			384
54	Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val			
55	115 120 125			
56	aca gag act ccc ctg atg aag gag gac tcc att ctg gct gtg agg aaa			432
57	Thr Glu Thr Pro Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys			
58	130 135 140			
59	tac ttc caa aga atc act ctc tat ctg aaa gag aag aaa tac agc cct			480
60	Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro			
61	145 150 155 160			
62	tgt gcc tgg gag gtt gtc aga gca gaa atc atg aga tct ttt tct ttg			528
63	Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu			
64	165 170 175			
65	tca aca aac ttg caa gaa agt tta aga agt aag gaa gag tcc aaa tat			576
66	Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu Glu Ser Lys Tyr			
67	180 185 190			
68	ggt ccc ccg tgc cca tca tgc cca gca cct gag ttc ctg ggg gga cca			624
69	Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro			
70	195 200 205			
71	tca gtc ttc ctg ttc ccc cca aaa ccc aag gac act ctc atg atc tcc			672
72	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser			
73	210 215 220			
74	cgg acc cct gag gtc acg tgc gtg gtg gac gtg agc cag gaa gac			720
75	Arg Thr Pro Glu Val Thr Cys Val Val Asp Val Ser Gln Glu Asp			
76	225 230 235 240			
77	ccc gag gtc cag ttc aac tgg tac gtg gat ggc gtg gag gtg cat aat			768
78	Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn			
79	245 250 255			
80	gcc aag aca aag ccg ccg gag gag cag ttc aac agc acg tac cgt gtg			816
81	Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val			
82	260 265 270			
83	275 280 285			
84	gtc agc gtc ctc acc gtc ctg cac cag gac tgg ctg aac ggc aag gag			864
85	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu			
86	290 295 300			
87	tac aag tgc aag gtc tcc aac aaa ggc ctc ccg tcc tcc atc gag aaa			912
88	Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys			
89	305 310 315 320			
90	acc atc tcc aaa gcc aaa ggg cag ccc cga gag cca cag gtg tac acc			960
91	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr			
92	325 330 335			
93	ctg ccc cca tcc cag gag gag atg acc aag aac cag gtc agc ctg acc			1008
94	Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr			
95	340 345 350			
96	tgc ctg gtc aaa ggc ttc tac ccc agc gac atc gcc gtg gag tgg gag			1056
97	Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu			

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98	agc aat ggg cag ccg gag aac aac tac aag acc acg cct ccc gtg ctg	1104
99	Ser Asn Gly Gln Pro Glu Asn Asn Tyr Thr Thr Pro Pro Val Leu	
100	355 360 365	
101	gac tcc gac ggc tcc ttc ctc tac agc agg ctg acc gtg gac aag	1152
102	Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys	
103	370 375 380	
104	agc agg tgg cag gag ggg aat gtc ttc tca tgc tcc gtg atg cat gag	1200
105	Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu	
106	385 390 395 400	
107	gct ctg cac aac cac tac aca cag aag agc ctc tcc ctg tct ctg ggt	1248
108	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly	
109	405 410 415	
110	aaa tag	1254
111	Lys	
113 <210>	SEQ ID NO: 2	
114 <211>	LENGTH: 417	
115 <212>	TYPE: PRT	
116 <213>	ORGANISM: Artificial Sequence	
117 <220>	FEATURE:	
118 <223>	OTHER INFORMATION: artificial peptide sequence based on human	
119	sequence	
120 <400>	SEQUENCE: 2	
121	Met Ala Leu Thr Phe Ala Leu Leu Val Ala Leu Leu Val Leu Ser Cys	
122	1 5 10 15	
123	Lys Ser Ser Cys Ser Leu Gly Cys Asp Leu Pro Gln Thr His Ser Leu	
124	20 25 30	
125	Gly Ser Arg Arg Thr Leu Met Leu Leu Ala Gln Met Arg Lys Ile Ser	
126	35 40 45	
127	Leu Phe Ser Cys Leu Lys Asp Arg His Asp Phe Gly Phe Pro Gln Glu	
128	50 55 60	
129	Glu Phe Gly Asn Gln Phe Gln Lys Ala Glu Thr Ile Pro Val Leu His	
130	65 70 75 80	
131	Glu Met Ile Gln Gln Ile Phe Asn Leu Phe Ser Thr Lys Asp Ser Ser	
132	85 90 95	
133	Ala Ala Trp Asp Glu Thr Leu Leu Asp Lys Phe Tyr Thr Glu Leu Tyr	
134	100 105 110	
135	Gln Gln Leu Asn Asp Leu Glu Ala Cys Val Ile Gln Gly Val Gly Val	
136	115 120 125	
137	Thr Glu Thr Pro Leu Met Lys Glu Asp Ser Ile Leu Ala Val Arg Lys	
138	130 135 140	
139	Tyr Phe Gln Arg Ile Thr Leu Tyr Leu Lys Glu Lys Lys Tyr Ser Pro	
140	145 150 155 160	
141	Cys Ala Trp Glu Val Val Arg Ala Glu Ile Met Arg Ser Phe Ser Leu	
142	165 170 175	
143	Ser Thr Asn Leu Gln Glu Ser Leu Arg Ser Lys Glu Glu Ser Lys Tyr	
144	180 185 190	
145	Gly Pro Pro Cys Pro Ser Cys Pro Ala Pro Glu Phe Leu Gly Gly Pro	
146	195 200 205	
147	Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp Thr Leu Met Ile Ser	

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148	210	215	220
149	Arg Thr Pro Glu Val Thr Cys Val Val Val Asp Val Ser Gln Glu Asp		
150	225	230	235
151	Pro Glu Val Gln Phe Asn Trp Tyr Val Asp Gly Val Glu Val His Asn		240
152	245	250	255
153	Ala Lys Thr Lys Pro Arg Glu Glu Gln Phe Asn Ser Thr Tyr Arg Val		
154	260	265	270
155	Val Ser Val Leu Thr Val Leu His Gln Asp Trp Leu Asn Gly Lys Glu		
156	275	280	285
157	Tyr Lys Cys Lys Val Ser Asn Lys Gly Leu Pro Ser Ser Ile Glu Lys		
158	290	295	300
159	Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu Pro Gln Val Tyr Thr		
160	305	310	315
161	Leu Pro Pro Ser Gln Glu Glu Met Thr Lys Asn Gln Val Ser Leu Thr		320
162	325	330	335
163	Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile Ala Val Glu Trp Glu		
164	340	345	350
165	Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr Thr Pro Pro Val Leu		
166	355	360	365
167	Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Arg Leu Thr Val Asp Lys		
168	370	375	380
169	Ser Arg Trp Gln Glu Gly Asn Val Phe Ser Cys Ser Val Met His Glu		
170	385	390	395
171	Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu Ser Leu Ser Leu Gly		400
172	405	410	415
173	Lys		
175	<210> SEQ ID NO: 3		
176	<211> LENGTH: 2		
177	<212> TYPE: PRT		
178	<213> ORGANISM: Artificial Sequence		
179	<220> FEATURE:		
180	<223> OTHER INFORMATION: artificial peptide linker sequence		
181	<400> SEQUENCE: 3		
182	Gly Ser		
183	1		
185	<210> SEQ ID NO: 4		
186	<211> LENGTH: 7		
187	<212> TYPE: PRT		
188	<213> ORGANISM: Artificial Sequence		
189	<220> FEATURE:		
190	<223> OTHER INFORMATION: artificial peptide linker sequence		
191	<400> SEQUENCE: 4		
192	Gly Gly Ser Gly Gly Ser		
193	1 5		
195	<210> SEQ ID NO: 5		
196	<211> LENGTH: 12		
197	<212> TYPE: PRT		
198	<213> ORGANISM: Artificial Sequence		
199	<220> FEATURE:		

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200 <223> OTHER INFORMATION: artificial peptide linker sequence
201 <400> SEQUENCE: 5
202 Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
203 1 5 10
205 <210> SEQ ID NO: 6
206 <211> LENGTH: 17
207 <212> TYPE: PRT
208 <213> ORGANISM: Artificial Sequence
209 <220> FEATURE:
210 <223> OTHER INFORMATION: artificial peptide linker sequence
211 <400> SEQUENCE: 6
212 Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly
213 1 5 10 15
214 Ser
216 <210> SEQ ID NO: 7
217 <211> LENGTH: 23
218 <212> TYPE: PRT
219 <213> ORGANISM: Artificial Sequence
220 <220> FEATURE:
221 <223> OTHER INFORMATION: artificial peptide linker sequence
222 <400> SEQUENCE: 7
223 Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gly Gly
224 1 5 10 15
225 Gly Ser Gly Gly Gly Ser
226 20
228 <210> SEQ ID NO: 8
229 <211> LENGTH: 30
230 <212> TYPE: PRT
231 <213> ORGANISM: Artificial Sequence
232 <220> FEATURE:
233 <223> OTHER INFORMATION: artificial peptide linker sequence
234 <400> SEQUENCE: 8
235 Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gly Gly
236 1 5 10 15
237 Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser
238 20 25 30
240 <210> SEQ ID NO: 9
241 <211> LENGTH: 40
242 <212> TYPE: PRT
243 <213> ORGANISM: artificial sequence
244 <220> FEATURE:
245 <223> OTHER INFORMATION: artificial peptide linker sequence
246 <400> SEQUENCE: 9
247 Gly Gly Gly Ser Gly Gly Ser Gly Gly Gly Ser Gly Gly
248 1 5 10 15
249 Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly
250 20 25 30
251 Gly Gly Ser Gly Gly Gly Ser
252 35 40

VERIFICATION SUMMARY

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